

## CEE Highlights

- Hands-on Education
- Undergraduate Research Experiences
- Service Learning
- Global Education
- Green Engineering Experiences

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## SCHOOL'S IN SESSION



**Dr. Kauser Jahan** along with **Dr. Jess Everett** and faculty from other engineering disciplines received funding from the NSF for a grant titled "Hands on an Aquarium". This grant allows faculty to partner with the New Jersey Academy for Aquatic Sciences and the Cumberland County College to develop curricula to expose engineering content to K-12 and pre college students/teachers. Engineering students are instrumenting a marine aquarium at the NJAAS to provide real time water quality data and visual images.

## Water for La Cieba , Honduras

The people of La Cieba, Honduras rely on hand dug wells and a local river for drinking water; however, their water is contaminated. In the last 5 years, over 30 children have died from water-related illnesses in this small community of about 80 homes. **Dr. Jess W. Everett** along with the EWB student chapter members went to La Cieba, to map the town, measure water quality parameters, and identify possible sites for a town well and tank.



# CEE FACULTY



**Dr. Kauser Jahan, P.E.**  
Professor and Chair

**Environmental  
Engineering**

**NJ ASCE Educator of  
the Year, 2006**



**Dr. Ralph A. Dusseau**

**DRPA Professor and  
Founding Chair  
Bridge Engineering**

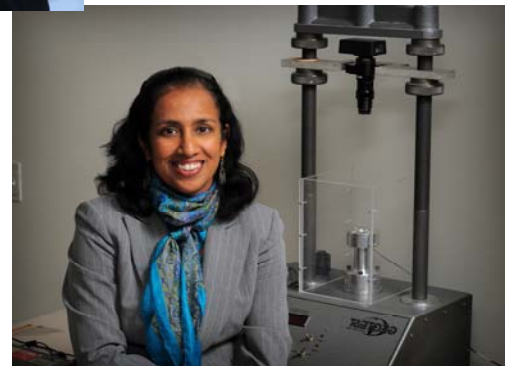
**NJ ASCE Educator of the  
Year, 2000**

**Innovative  
Educators**

**Active  
Explorers**



**Dr. William Riddell**  
Assistant Professor  
Material Science



**Dr. Beena Sukumaran**  
Associate Professor  
Geotechnical Engineering



**Dr. Yusuf Mehta, P.E.**  
Associate Professor  
Transportation Engineering



**Dr. Douglas Cleary, P.E.**  
Associate Professor  
Structural Engineering

**Multidisciplinary  
Researchers**



**Dr. Jess W. Everett, P.E.**  
Professor  
Sustainable Engineering

**Dr. Joshua Wyrick**  
Assistant Professor  
Water Resources  
Engineering



# Message from the Chair



On behalf of the entire faculty, staff and students, I would like to thank Ralph A. Dusseau for his dedication and service as the Founding Chair of CEE. Ralph has established an excellent CEE program that is student centered and ready to meet the global demands of the 21<sup>st</sup> century. We are poised to tackle some major engineering challenges as identified by the National Academy of Engineering. The CEE program's research and teaching activities are arguably at their best as I become the new Chair.

It is an honor and privilege to serve as the new Chair and I am excited to be a part of the new growth that the CEE program is experiencing. We have brand new research laboratories in the South Jersey Technology Park, a new Masters in Engineering Management Program and new research students in our traditional Masters program. Yes, "New" is the key word for the coming years as the CEE program poises itself to become the best in the nation. Our graduates are highly successful in the workplace as evidenced by employer feedback and job placement. We have unique opportunities for students in green engineering as well as community engagement. This newsletter will help you discover the incredible contributions that the current students, alumni and faculty are making to move the program to "new" and exciting heights. These are exciting times for our program and the engineering field and I am extremely proud and fortunate to be a part of these phenomenal times.

*Sincerely,*

A handwritten signature in cursive script that reads "Kauser Jahan".

**Kauser Jahan, Ph.D., P.E.**  
**Professor and Chair**

## CEE IS GREEN

CEE faculty are taking a strong lead in green engineering initiatives. Dr. W Riddell and Jess Everett have received funding from local agencies to lead energy audit initiatives in the South Jersey region. Both faculty are also involved in investigating the use of solar and wind energy alternatives for select agencies.



Dr. D. Cleary has been involved with pervious pavement systems while Dr. Y. Mehta is investigating the beneficial reuse of incinerated sewage sludge ash in hot mix asphalt. Dr. K. Jahan is leading an investigation on heavy metal contamination in highway marking glassbeads. She is also studying the toxicity of roadway chemicals used by the transportation industry.

Apart from these research initiatives all core Civil Engineering courses address green engineering concepts which include waste/wastewater treatment, pollution prevention technology, life-cycle analyses, green construction materials and protection of watersheds.

# Faculty Highlights

## Strong Ties with DOTs'

**Dr. Yusuf Mehta** continues to build strong partnerships with the state DOTs around the country including the Federal Highway Administration. A recent NJDOT project focuses on motorbike safety issues. Nationally, as motorcycles become increasingly popular, motorcycle deaths have increased dramatically in the U.S. In New Jersey, motorcyclist fatalities have more than doubled since 1991 while overall highway deaths in the state have remained relatively unchanged over the same time period. The goal of this project is to develop a strategic plan for the reduction of New Jersey motorcycle accident rates in both fatal and non-fatal crashes.



## Rowan Students Awash in Lessons from Biggest Flood Ever

**Dr. Joshua Wyrick** organized and led a field trip to Oregon and Washington states to see remnants of huge Ice Age floods. Six CEE students and two ME students accompanied Dr. Wyrick and Dr. Tom Merrill (ME) on the four-day trip. The floods occurred over 12,000 years ago as a result of a continental ice mass blocking up a tributary to the Columbia River. When the waters eventually broke through the ice dam, they scoured out most of the eastern Washington, leaving behind such tell-tale characteristics that are still visible today, such as huge U-shaped valleys with no water, streamlined hills in farm fields, ripple dunes taller than us, and giant boulders in the middle of the desert. These floods were the largest to have ever occurred on Earth, and had enormous impacts on our landscape. The trip was also meant to juxtapose these mega-floods with modern-day floods and attempts to control them.



## NSF Funds Scholarships for Students

The College of Engineering has received \$600,000 from the NSF for "Scholarships to Enhance the High-Tech Workforce of Southern New Jersey". Eligible Engineering students who enter Rowan during Fall 2009 and Fall 2010 will receive four year scholarships amounting to some or all of their remaining financial need.

**Dr. J. Everett** along with other engineering faculty is heading this endeavor.

*Contemporary  
Undergraduate  
Research*

# Redefining Education

## Project Lead the Way (PLTW)

**Dr. Douglas Cleary** is the Affiliate Director for PLTW in the state of New Jersey. PLTW provides pre-engineering curricula that can be implemented by middle schools and high schools. We offered our first PLTW summer institute in Rowan Hall from July 20<sup>th</sup> to August 1st. Nineteen high school teachers attended last summer's training program where they were immersed in the engineering curricula they would be teaching in their schools.



**Leaders  
in  
K-12  
Education**

## GAMTTEP High School Scholars Program



**Dr. Kauser Jahan** received funding from the USDOT for offering a 4-week workshop to high school students from underrepresented populations to learn about transportation engineering. The program known as GAMTTEP stands for the Garrett A. Morgan Transportation Technology Education Program in memory of Garrett A. Morgan the inventor of the traffic light. Twenty five students from area high school participated in research activities that focused on the needs of the transportation industry.

## Engineering Clinics for Teachers (ECT)

Rowan University's Colleges of Engineering and Education offer an *Engineering Clinic* experience for middle school teachers. This workshop exposes teachers to various engineering disciplines via hands on activities. **Dr. Kauser Jahan** is the director of the ECT program. The program is funded by the Edison Venture Funds. A total of 35 teachers from the state participate every summer to learn about engineering careers and participate in engineering modules. Teachers are provided a stipend and housing if needed. They also come back for two one-day follow-up workshops in the fall and spring semesters.



# Student Achievements



**Keicha Muriel (Class of 2009)** won the NJAWWWA Drinking Water Scholarship for her work with the Engineers without Borders El Salvador Project. She also received the Brown and Caldwell Minority award and the Lockheed- Martin Scholarship for academic merit. Keicha served as EWB President for 2008-2009. She was recognized by the Philadelphia Engineers' Foundation for National Engineers' Week 2009 for her academic merit and service to the engineering profession.

Keicha is being honored by the department for her commitment to community service by receiving the CEE 2009 Outstanding Service Award.

Outstanding  
Leadership

Excellence in  
Extracurricular  
Activities

Academic  
Excellence

## Outstanding Athlete Award

**Greg Kuczynski (Class of 2009)** was named **Athlete of the Week** last fall. Greg took 47th place at the Navy Invitational (Sept. 13, 2008). He was the first Prof to cross the finish line with a time of 27:10.10 over the 8K course. It marked Rowan's fastest individual time this season. Greg also holds a number of positions with the professional student chapters such as Tau Bi Pi and ASCE. He has won numerous awards for his athletic prowess. Greg holds the Highest GPA for the Class of 2009 CEE graduates.



## Best Paper Award

**Kyle Denny, Salvatore Randazzo and Cameron Corini** won the Best Undergraduate Student Paper award from the Delaware Valley Engineers week council for their paper titled: "**Evaluation of the Compaction Characteristics of Unbound Material using the Superpave Gyratory Compactor.**" The work is sponsored by the FAA and studies the compaction and shear flow characteristics of the sub-base layer during construction and trafficking by evaluating the performance of the sub-base material in the Superpave Gyratory Compactor (SGC) at various stress levels and at different moisture contents during compaction and trafficking.



# CEE Alumni



## ***Doug Gabauer (Class of 2001, MS 2003)***

completed his doctoral degree at Virginia Tech. Starting in the fall of 2008, he joined Bucknell University as an Assistant Professor in the Civil and Environmental Engineering Department. Doug is the first CEE alumni to start a career in academia. Doug has been actively involved in research related to roadside fatalities and hopes to reduce the grim number of roadside fatalities each year by improving the design of guardrails, bridge rails and other roadside safety structures. The CEE faculty wish Doug a successful career in the coming years.

***A sound undergraduate education that prepares students for graduate school.***

***Multidisciplinary Research***

***Excellent Career Placement***

**A number of CEE alumni are currently officers of the ASCE South Jersey Branch. The CEE Program is very proud of their alumni who are active in the professional societies.**

## ***Wayne Roorda (Class of 2000)***

is a Project Manager at Bach Design Group. **He is currently President for the ASCE South Jersey Branch.** Wayne is involved with both private and municipal projects in his job. Outside of work he enjoys traveling and is currently in the midst of planning his wedding with his fiancée, Sarah.



***Jamie Gooch (Class of 2005)*** is currently working for Cornell & Co., Inc. as a project engineer. She is finishing her term as President of the South Jersey ASCE Branch Younger Members Forum (YMF) and was appointed co-chairperson for the 2009 ERYMC Conference (Eastern Region Younger Member Council).



*South Jersey Branch*  
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***The CEE program is very proud of their alumni accomplishments.***



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## Developing Global Engineers



**Dr. B. Sukumaran** along with a team of students **has** developed a manually operated pedal powered grain crusher to process anything from corn to barley. The bike powered grain crusher will be adopted by the Dhan Foundation in India for manufacturing and piloting to help poor communities. This project is part of a larger project titled “Engineering Innovators without Borders”